

PURPOSE

Alzheimer's disease debuted in 1994 on the list of 12 leading causes of death among Arizona residents. By 2000, Alzheimer's disease was the 7th leading cause of death for all ages and 5th leading cause for Arizonans 65 years of age and older. Alzheimer's disease is a progressive degenerative and increasingly debilitating condition characterized by progressive loss of memory, difficulty in finding right words or understanding what people are saying, difficulty in performing previously routine tasks, and changes in personality. Alzheimer's disease gradually destroys vital nerve cells in brain. At later stages of the disease, persons with Alzheimer's disease are bedridden and susceptible to developing other medical conditions, especially pneumonia. These secondary conditions may also result in death.

The purpose of this report is to provide information to individuals interested in Alzheimer's disease mortality among Arizona residents. The data for 2000 are placed in a temporal context by comparison with the data for the preceding years.

METHODS AND SOURCES

Data on the number and characteristics of Alzheimer's deaths were obtained from the death certificates filed with the Arizona Department of Health Services.

Population denominators for Arizona residents, used to calculate rates, are the latest available estimates for 1991-1999, released in December 1999 by the Population Statistics Unit in the Arizona Department of Economic Security (www.hs.state.az.us/plan/popsets19.htm), and census enumerations for 1990 and 2000 from the U.S. Census Bureau (www.census.gov/).

Beginning with the 2000 data year in Arizona (1999 nationally) two major changes have occurred that affect the computation of mortality rates, tabulation of leading causes of death and analyses of mortality data over time. First, a new revision of the International Classification of Diseases (ICD), used to classify causes of death, was implemented. The Tenth Revision (ICD-10) has replaced the Ninth Revision (ICD-9), which was in effect

since 1979. Second, a new population standard for the age adjustment of mortality rates has replaced the standard based on the 1940 population and used since 1943.

Both changes have profound effects on the comparability of mortality data and continuity in statistical trends. Age-adjusted rates can only be compared to other age-adjusted rates that use the same population standard.

Breaks in comparability of mortality statistics effective with deaths occurring in 2000 also result from the implementation of ICD-10. Among other things, over 55 percent more deaths are classified to Alzheimer's disease in ICD-10 than ICD-9. Almost all of this increase comes from deaths classified in ICD-9 as Presenile dementia but reclassified in ICD-10 to Alzheimer's disease.

Any comparison of causes of mortality in Arizona between 2000 and previous years needs to take into account the changes in statistical trends that can be attributed to changes in the classification system alone. In order to assess whether changes in cause-specific mortality are "real" or due to new coding and classification procedures, both age-specific and age-adjusted mortality rates used in this report are "comparability-modified".

In order to obtain comparability-modified data, the number of deaths or the death rate for a particular cause of death (such as Alzheimer's disease) classified by ICD-9 is adjusted by multiplying it by the comparability ratio for that cause. Comparability ratios are measures of comparison between ICD-9 and ICD-10. Comparability ratio of 1.0 indicates that the same number of deaths would be assigned to a cause-of-death when ICD-9 or ICD-10 was used. The comparability ratio for Alzheimer's disease is 1.5536, indicating a 55.4 percent increase in Alzheimer's disease death when classified by ICD-10.

It is important to note that the comparability ratios used in this publication are based on the preliminary comparability study conducted by the National Center for Health Statistics and are subject to change once the final comparability study is completed.